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Historical Archeology

David Orr

The role of historical archeology in the National Park Service has increased dramatically during the last decade and a half. Exciting discoveries have been made which have changed historical archeology from its earlier role as a technical adjunct to history and architecture into an independent discipline which has developed its own complex body of method and theory. Because the Park Service has acquired historic properties which reflect a wide spectrum of time periods, subjects, and databases, historical archeology is heavily relied on by park planners, managers, researchers, and interpreters. The growth of the discipline closely parallels the Service's recent inroads in historic fields and areas which demand the services of anthropologists and archeologists using historic methods in their work. The true impetus to provide a series of articles for the *CRM Bulletin*, dedicated to this subject, stems from both the rapid growth of the discipline itself, its role in the Park Service's compliance and research programs, and the stimulation which the new areas have created nationally.

Historical archeology in the past has served many masters and has accomplished a diverse series of tasks. Presently, archeologists are conducting investigations covering a truly formidable array of time periods ranging well into the 20th century. Coupled with this is an equally impressive range of cultural fields and sub-groups. In a previous *CRM Bulletin*, Doug Scovill (NPS Chief Anthropologist) has eloquently argued for the Park Service to rely upon the expertise of both archeologists and cultural anthropologists in the formation of research and management goals and policies. Historical archeologists in recent years have well heeded this concern and have appropriately broadened their analytical scope to include cultural anthropology. Additionally, newly developed subfields of material cultural analysis have evolved which have the work of historical archeologists rooted deeply in their method and achievements. Vernacular architecture, for example, has shown that the archeological record of ephemeral structures and "impermanent" housing has created a fresh portrait of the 17th and 18th century tidewater Virginia hinterland. Industrial archeology, on the other hand, has used historical archeology as a tool to reinterpret more contemporary American urban manufacturing centers.

Ultimately, it is the public at large which stands to benefit from the recent achievements of historical archeologists. The proliferation of very carefully designed volunteer programs in archeology (a good example being the recently completed work at Valley Forge National Historical Park) internships, and other participatory projects, has tapped the general public's sensitivity to and appreciation for the dynamic process of the discipline. We must accomplish more of this in the future and at the same time bring forth our findings in clearly argued and easily read documents and publications. A serious correlation to this is the provision for adequate storage, analysis, and conservation of the physical products of excavation—the artifacts themselves.

The material memories of yesterday are important legacies for all of us, both as individuals and as professionals. For in understanding the social changes involved in past

behavior we inevitably come closer to a better understanding of ourselves. Historical archeology is an excellent process in the forging of interpretative links with a forgotten time and place.

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Historical Archeology and the Management of Cultural Resources

Vergil E. Noble

The discipline of historical archeology is relatively young in comparison with the study of prehistory. It was not until 1967 that archeologists and others interested in the investigation of historic period sites gathered to create a scholarly society devoted to the advancement of such research, some 30 years after a society was organized to promote American archeology in general. Nevertheless, historical archeology has long been practiced in the National Park Service. In fact, excavations performed at Jamestown National Historic Site and Fort Necessity National Battlefield in the early 1950s were among the earliest archeological efforts at historic period sites in North America, and the discipline's emergence as a distinct field of study is due in part to its close association with NPS programs.

Those early endeavors sought to collect information through the excavation of ruins that would be useful in building accurate reconstructions of historic structures and interpreting the past to visitors. As a by-product, they also produced data that contributed to a broader understanding of early American life and stimulated other inquiries. Such goals continue to provide impetus for the investigation of historic period properties within the National Park System. Today, however, a great deal of the historical archeology performed by and for the NPS is necessitated by federally-mandated programs relating to the management and preservation of cultural resources.

This article is the first of a series that will present case studies showing the various roles historical archeology plays in today's National Park Service. As such, it carries the burden of introducing readers to that area of research, with special reference to the NPS mission. In this way, each of the articles to follow may be read and understood in a larger context.

Before discussing historical archeology as a part of NPS cultural resource management, it is appropriate to define historical archeology and its objectives. Historical archeology, as it is practiced in North America, can be defined as a faction of archeology that is concerned with understanding those cultures that have occupied this continent since it was first explored and settled by non-aboriginal peoples. Although early research emphasized the study of eastern colonial settlements and fortifications founded primarily by Europeans, historical archeologists have widened their interests in recent years to encompass a diverse subject matter. Today, research focuses on virtually all cultural groups and site types that have been present in North America since initial colonization, including historic Indian villages, overseas Chinese mining camps, 19th-century canals, and even 20th-century industrial complexes.

A common denominator in such varied research is the availability of other lines of evidence in addition to what can be found in the excavated soils. Maps, civil records, correspondence, and other types of documents—including oral histories in some cases—help to focus research on specific topics and offer an organizing context that assists interpretation of the archeological record. Those are luxuries denied to researchers into prehistory, and they provide historical archeology its greatest potential as a means toward understanding the past.

In view of all the documentary sources available, one might wonder what historical archeology can possibly add to our knowledge. We must remember, however, that many, if not most, people in a literate society do not produce records that mark their passing. Even in modern America, where the incidence of literacy is high, few of us articulate our

experiences in a form that will survive for future scholars to ponder. To be sure, there are census data and other vital statistics, as well as the common legal and financial documents, but largely those are produced by observers, not by persons described in the records. Further, all too often the standard historiographic sources that document past events do not attend to certain questions that might be of interest to modern researchers. We may have access to good documentation on major events and historical personages, but information on the daily lives of common people is generally absent in the historical record.

It should be apparent, then, that the recovery of archeological materials from historic period sites is a more direct and less biased means to approach the past. The deposits formed by past human activities are direct products of the site occupants. Moreover, all persons, regardless of status, contribute to formation of the archeological record.

The archeological record complements the historical record; it does not duplicate it. Because of its different perspective, archeology can sometimes shed light on questions where documents fail to provide answers. Through careful analysis of data recovered from excavation and the interplay of historical documents, it may be possible to achieve a fuller understanding of the historic past.

Survey and Planning

Within the National Park Service, historical archeology has three major functions: guidance for development planning, information for interpretive programs, and compliance with Federal laws and agency policies. Each is an important aspect of the NPS mission to preserve America's cultural resources and make them accessible to all.

The first two functions have long been a part of Service programs. Excavations carried out to supply information on the appearance of structures is often necessary to insure the historical accuracy of reconstructions. They are also needed to salvage essential archeological data from the construction areas before those contexts are destroyed by reconstruction of buildings on their original positions.

An important part of this process is the recovery of information and artifacts that subsequently can be integrated into the interpretive program. Previously unknown facts about past events and places often are revealed through archeological investigations. They enhance our knowledge and provide the visitor with a qualitatively different perspective on the past. Further, many artifacts collected from archeological sites are often returned after analysis for incorporation in museum displays at the parks. Such objects are tangible evidence of past activities, making the visitor's experience all the more vivid and real.

Today, most of the archeological research carried out is governed by the need to comply with Federal historic preservation laws. Legislation requires that Federal agencies guard against the immoderate loss of irreplaceable cultural resources whenever development occurs on Federal lands, with Federal funding, or under Federal licensing. Steps must be taken to inventory and evaluate the significance of cultural resources that may be in harms way prior to the initiation of development projects. Accordingly, archeological survey now is routinely a preliminary step in the planning of development projects. Construction areas are examined in an attempt to locate all cultural resources that might be present, and recommendations are conveyed to planners concerning the potential impacts of their initiatives.

Should a survey result in the location of archeological sites or ruins in a project area, a second phase of evaluative testing may be needed to make informed decisions on the management of those resources. Normally this will entail sampling the sites through controlled excavations in order to determine basic information on site characteristics, such as size, age, type, and cultural affiliation. A critical factor that also must be addressed at this stage is whether site deposits are in a condition that would enable meaningful recovery of information. If a site already has been disturbed by earlier natural or human processes, there may be little potential for it to contribute to our knowledge of past activities.

With such information in hand, the archeologist must assess the significance of all sites so evaluated. This is sometimes a difficult procedure that must weigh various factors, and the problem is often acute when dealing with historic period resources. As noted earlier, the field of historical archeology is a relatively young one. Consequently, there is not yet a large body of research data against which newly discovered sites can be measured, and in many instances broad research themes have not been clearly articulated in the archeological literature. This is especially true of late 19th- and early-20th-century sites, which only recently have become an interest among investigators.

Nevertheless, archeologists throughout the United States who are involved with the management of cultural resources are working to refine the criteria that can be used to assess the significance of historic cultural resources. State and regional management plans are being developed, and Federal planning documents are being compiled to address just such issues. Those efforts are helping to build a consensus of what is important and what is not, while acknowledging that priorities will doubtless change as our knowledge progresses and conditions differ. As a result, the decision-making process is fast becoming more informed and consistent.

Aside from the intrinsic significance of a particular archeological property, another factor that often receives consideration is how the site, or an aspect of the site, fits into the overall interpretive mission of the park in which it is located. Each park is charged with the responsibility to interpret one or more major themes to the public as part of its mission. When a site is associated with a park interpretive theme, its significance generally is unquestioned. Many sites or features present within a park's boundaries, however, may be totally unrelated to any theme designated in its management plan.

This fact sets up the possibility of contention in deciding whether steps should be taken to mitigate the adverse effects of disturbing a particular site through modification of the development plans or continued excavation to record data that would otherwise be lost. Policies dictated by the NPS and Federal legislation, however, are clear on this point. Cultural resources must be viewed and evaluated in the broader context of their potential to enhance our knowledge of the past in general, not the more narrow designated interpretive themes of a particular park.

Ultimately a decision is made after the relative costs and benefits of alternative actions are fully considered. Not every archeological site is important, nor can every important site be saved from destruction when roads, campgrounds, structures, and other park facilities are built. Nevertheless, if archeological research is performed well in advance of construction and is included as an integral part of the planning process, appropriate measures can be taken to ensure that necessary losses are kept to a minimum.

Data Collection

It also should be pointed out that data collected as part of the compliance procedures can be put to use in park interpretive programs, though not gathered expressly for that purpose. Further, basic information on the frequency and kinds of archeological resources present in a region has important implications for research into human settlement systems and other topics of academic interest.

In any instance of archeological survey or excavation, unique information bearing upon the past is gathered, analyzed, and disseminated. Reports of the work are produced not only for internal planning, but also for distribution to researchers outside the NPS who are interested in the subject matter. Moreover, field records and collections are curated in perpetuity, so that scholars can continue to examine them for new insights into the past. Accordingly, the investigation of historic period sites in the NPS serves a larger purpose than simply providing guidance to agency planners; it also contributes to the growth of historical archeology as a field of study.

Historical archeology has had a long tradition in the NPS, and in recent years the number of research projects undertaken on sites of the historic period has increased

dramatically. Some of the more interesting projects will be discussed in future issues of the CRM Bulletin as examples of what such research has to offer. We hope that through these articles readers will gain a better appreciation for the value of historical archeology to the National Park Service mission and to the public at large.

I owe thanks to Douglas Scott for encouraging me to write this article and to Carrol Moxham for her thoughtful comments on the draft manuscript.

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Reburial at the Little Bighorn

Douglas D. Scott and Melissa A. Conner

The Custer Battlefield archeological project began in 1983 when a fire swept the National Monument, laying bare the ground, so that physical evidence of the battle could easily be seen. That fall, Richard Fox, then a graduate student in archeology at the University of Calgary, completed a ten-day inventory of the battlefield and recommended further work. In 1984, the Custer Battlefield Historical and Museum Association funded an intensive research project which was carried by the Midwest Archeological Center for the Rocky Mountain Regional Office.

One of the goals of this project was to test the accuracy of the white marble markers that dot Custer Battlefield through archeological excavation. Engraved on each marker is the poignant phrase, "U.S. Soldier Fell Here, June 25, 1876." However, about 210 men fell with Custer and there are some 252 markers on the field, so at least 42 stones do not represent where men fell.

The history of marker placement gave reason to doubt that many actually represent the place where a soldier fell. The men were first buried, really just covered with a little soil, a few days after the battle. They were reburied or covered again in 1877 and again in 1879, and finally in 1881 the bodies were exhumed and placed in a mass grave at the foot of the granite memorial shaft that now dominates the so-called Last Stand Hill. The marble markers were set in 1890, nine years after the reburial in the mass grave and some fourteen years after the battle itself. The placement of the markers has frequently been used to help reconstruct the battleline. If the markers were badly misplaced, these reconstructions are invalid. Project personnel reasoned that despite earlier exhumation, archeological techniques could uncover evidence suggesting whether a man had been buried near a marker. We expected to find metal uniform parts—i.e., buttons and boot nails. We expected to find bullets that might have been in the body when the flesh decayed, as well as cartridges if the man had been defending himself in that area, and we expected to find a few bones (unless an exhumation party is trained in human osteology, they will often miss the small bones).

We were suspicious of the paired markers and the explanation of Capt. Owen Sweet (who lead the marker placement detail) that he set two markers in proximity for pairs of men who fell as comrades in battle. Other scholars have suggested that each pair represents a single soldier. If the original burial parties scooped dirt from either side of the corpse in the burial process, it would leave a shallow indentation on either side of the burial. Sweet's party, seeing a scatter of human bone and two shallow indentations may have assumed each indentation represented a burial, and placed two markers at the site. By excavating around the paired markers, we hoped to determine if one or two men had been buried in that area.

Excavations Tell Story

The project attempted to sample roughly 10% of the markers on the field—amounting to 26 excavation units. Of these, five units found no historic artifacts or bone, no indication that a soldier had ever been buried at that location. All of the paired markers showed remains consistent with those of only a single individual which indicates the paired markers may represent the majority of the spurious markers. Most of the units did yield bone and artifacts. In a few cases, we found bones representing an entire limb that had been missed by the burial party.

No remains of Indian warriors were found. The Indian accounts of the battle clearly indicate their dead were removed from the field and buried elsewhere. Thus, the

osteological analysis of the recovered bone focused on the soldiers who fought with Custer.

In general, the excavations showed that the mass grave contains most of the bones of the enlisted men of Custer's command. However, not sticklers for detail, the men who gathered these mortal remains for re-interment left some bones behind.

In addition to telling us whether the markers accurately represent soldier positions, the excavations yielded detailed stories of the men who fought with Custer. Osteological analyses, carried out by forensic anthropologist Dr. Clyde Snow, combined with the artifacts in the excavation, painted poignant pictures of the soldiers in their last moments. The forensic studies of the bones have provided data for interpretive scenarios that have helped to personalize the battle and put some flesh back on the men who fought there. Once the studies were completed, however, a management decision was made to rebury the bones.

The decision was made for several reasons. First, it is the policy of the National Park Service as stated in NPS-28 to re-inter human remains after osteological examination has been completed if the remains can be individually identified or can be affiliated with a known genetic or ethnic group. Second, military law also comes into play in this case—the Code of Federal Regulations 10 CFR Part 1088 requires the burial of veterans. Even though none of the bones could be positively associated with any of the individual battle participants, the bone assemblage represented a known group of individuals. Since these human remains clearly fell into the categories covered by the regulations stated above, reburial was required.

Any scientist is uncomfortable seeing unreplicatable data put out of his/her reach. Each piece of human bone represents data as unique as that individual. And for the anthropologist there is probably no greater form of respect for a group than attempting to learn and understand as much as possible about the culture and the individuals who participated in it. In studying the bones of the soldiers, we learned much about them and learned to respect them more. Because of this, care was taken to preserve as much data as possible before the reburial.

Bones Studied

Before the bones were reburied, they were studied as thoroughly as modern technology would allow. As mentioned above, they were given a detailed osteological examination by Dr. Clyde Snow, a consultant to the Oklahoma State Medical Examiner's Office. This included detailed bone measurements to determine that person's height, other examination to determine age and wounds received during the battle, as well as injuries or diseases that occurred before the battle.

The bones were photographed, and close-ups were taken of parts showing injuries or diseases. All the bones were x-rayed to search for lead spray from bullets, as well as healed injuries or pathologies that might otherwise have been missed. Samples were also taken for chemical analysis. Casts were made of bones with injuries or peculiarities for further study and interpretation. Even though the bones have been reburied, analysis of this data continues.

Just as important as the studies that were carried out was the assurance that the data would not be destroyed as the result of the reburial, that it would not rot away. The goal of reburial was to insure the integrity of the collection for as long as possible. In most cases of reburial the bones are turned over to concerned parties who cremate the remains, bury them in undisclosed locations, or bury them in coffins which can, in fact, accelerate the deterioration process. All of these result in the permanent loss of data. In the Custer case, every effort was made to ensure the deterioration of the bones would be minimized for many years to come.

First, all the bone was sealed in individual plastic bags. Both the bags and the bones were labeled with the marker from which it had come and the catalog number of the bone.

This was necessary to preserve the archeological context of the bone. It is the context that helps make the archeological data useful. The bags were then placed into a specially designed and manufactured airtight, waterproof, Plexiglas container. The container was divided into compartments for the groups of bones. The container was sealed with a waterproof sealant and then placed in a coffin for the burial ceremony.

The reburial of archeologically discovered human remains is a hot issue in discipline at the moment. Many ethnic and cultural groups wish the remains of their ancestors left in peace or reburied as quickly as possible, often to the chagrin of scientists who want to learn about the people of the past from the studies of the bones. The reburial of Custer's troopers demonstrates how the needs of science and reburial can be blended together to recover the most information possible about the people, minimize the potential loss of information, and yet show the proper respect for those who have gone before.

For further reading, consult Archaeological Insights Into the Custer Battle by Douglas D. Scott and Richard A. Fox, Jr.; Norman, University of Oklahoma Press, 1987.

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Going Overboard for Historical Archeology

Roger E. Kelly

Archeology of historic sites within NPS field areas which happen to be underwater is a 'growth industry' for this agency. More than half a century ago, the first documented underwater historical "archeology" project in the Nation was in Virginia's York River waters. This pioneering work in late 1934 and during May-June 1935 was accomplished by 'hard-hat' divers from the Newport News Mariners' Museum and staff from Colonial NHP. From three vessels of Cornwallis' fleet, now resting in 40 feet of water, artifacts were recovered for exhibit at Mariners' Museum and Colonial NHP Visitor Center at Yorktown. In the mid-1950s, the location and study of USS Cairo involved NPS historians using crude 'remote sensing' methods which led to further research and recovery. Electronic means of finding historical resources underwater were first carried out in 1965-66 within Point Reyes National Seashore, central California, as contracted work for NPS. In the 1980s, Park Service archeologists, historians, and other specialists have 'gone overboard' wearing SCUBA gear or in other ways focused on submerged historic sites in nearly every type of water environment. Where will the Service be in this effort beyond the 1980s?

What to we know?

Nearly 25 percent of NPS units nationwide contain some type of water environment significant enough to have been a scene for past human activity. But, to some CRM specialists and managers alike, the submerged historic resources are not easy to see and may not receive much management attention until a crisis develops. In fact, the acres of submerged lands within field units equals the size of Yellowstone, but the number of submerged archeological resources known is embarrassingly small. For example, after nearly two decades of hard work by the Southeast Archeological Center staff, working with universities and volunteers, 81 underwater sites have been recorded within 8 of 16 parks with submerged lands or adjacent to state underwater lands. But none of these eight Southeast Region parks containing known sites has had a survey of greater than 20 percent of a park's submerged terrain. And the record is not any better in Midwest Region's Great Lake parks, Pacific Northwest or Western Region's coastal or island park units, although recent joint projects of the NPS Submerged Cultural Resources Unit (SCRU), WASO's National Maritime Initiative, regional and park members, and U.S. Navy detachments have been accomplished in these regions. In Mid-Atlantic or North Atlantic Regions, fewer projects have been completed. Submerged historic sites are 'out there' but undocumented, a situation similar to historical archeological resources in large natural areas of the Western states or Alaska. Only a small number of submerged historic sites are on the National Register and these are mostly shipwrecks.

Although submerged historic and archeological resources are hidden from view, they still exist as opportunities for creative management. Pressures, impacts, and threats toward these resources are no different—in fact, often greater— than those upon terrestrial historic sites. But additional technology, time and dollars are needed to identify, assess and evaluate submerged archeological and historic resources—the same goals for historic sites elsewhere. Projects need different approaches and often work best when coordinated with other agencies, private sector groups, volunteers, and other contributors. There is definitely a fresh challenge in designing projects using many individuals' talents and resources for underwater work, with all its senses of adventure, mystery and appealing out-of-this-world

feeling. Depending on local situations, completion of a project brings rewarding follow-up attention on newly-identified resources which give a more complete story than land-base knowledge. Discovery, inventory, assessment and evaluation for submerged historic/ archeological resources are facets to this frontier of cultural resource management.

Types of Resources

Although low in number, the known historic archeological sites are surprisingly varied. Watercraft or vessels of all sizes are an expected resource type—from battleships to small flat-bottom boats. In fact, maritime archeology and history of the Nation may be more plentiful underwater than in museums. Navigational accidents or combat result in shipwrecks whether civilian, merchant marine or military or related to construction of massive masonry forts or major reservoirs and dams. And inundation pools behind reservoirs quietly cover mines and mills, sawmills and ranches, homesteads and cemeteries, bridges and roads as well as prehistoric sites. Piers and wharves, shipyards and slips, navigational aids and anchorage features such as breakwaters also lurk beneath waters of bays, estuaries, passages, or rivers. Historic period native American fish weirs, Pacific Islander fishpond walls, offshore shrines or ritual locations are submerged resources of native peoples. Because many man-made bodies of water are recreational areas, sport divers and the boating public sometimes encounter such submerged cultural resources. Other parks, seashores, historic sites or monuments with extensive natural waterways also receive a growing number of visitors with SCUBA interests as wreck divers, hobby photographers or dive clubs.

The Waterside-Landside Connection

Often a landside historic activity has a waterside operation as well; however, the landside resource usually receives the biggest share of attention—it's more easily seen, managed, and interpreted. But piers-connected roads and warehouses, wharves-linked commercial centers with railheads, and seashore beaches or landings provided land access for early travelers. Shipwrecks often meant a salvage or survivors' campsite nearby, although usually a very temporary occupation. Sealers, whalers, egg-harvesters, or bootleggers often conducted clandestine operations from land and water. And military activities such as amphibious attacks or their defense, downed aircraft, jettisoned war materials leave special (and sometimes hazardous) artifacts or features on offshore lands. For significant historic events along a coast, there's often an equally significant portion which occurred on or in water. SCRU's recent study of Charles H. Spencer's turn-of-the-century mining operation and paddle wheel steamboat in Glen Canyon is an excellent example.

Who owns what?

Since the Service sometimes has joint stewardship with a state government for submerged lands, we must recognize that even though underwater historic resources are within legislated boundaries of National Park System units, the legal ownership of submerged historic resources may rest with another agency. And usually that agency has little awareness about the resources' significance, condition, public values, or preservation responsibilities. Cooperative law enforcement and management approaches can and should be developed for more effective protection and interpretation.

Passage of the Abandoned Shipwreck Act brings the Service into dialogue with most states and other submerged land owners regarding maritime-related historic resources. As signed into law by the President in late April, this Act defines the public interest of the Nation in her maritime historic resources, particularly shipwrecks on public submerged lands. Taking shipwrecks out of the admiralty claim courts, these resources are claimed in

title by the United States, then transferred to the states, except for those resources already in Federal jurisdiction. The Shipwreck Act calls upon the Service to consult with various public interest groups and agencies to prepare standards and guidelines for shipwreck management by land owners, whether local, state, or Federal agencies.

Public meetings will be one activity by NPS to develop public opinions and recommendations for effective shipwreck management, including diver recreation uses, and establishment of underwater parks. Archeological and historical projects dealing with submerged state or federally-owned resources will very likely increase as well as work toward National Register nomination. The NPS will be the lead agency for implementing the provisions of the Act, but the law does not give NPS any additional direct enforcement or regulatory authorities.

To SCUBA or not to SCUBA?

From the time of NPS involvement with USS Cairo to present submerged historic site work involved a coordinated approach using archeological and historical research techniques, remote sensing and positioning electronic engineering, SCUBA, specialized curatorial methods, and great time investments.

To work in a foreign environment, underwater archeologists have borrowed technology from marine exploitative industries, geophysics, and manufacturers of dive gear, video and navigational equipment. In 1986, NPS joined other leaders in marine archeology for discussions hosted by the Office of Technology Assessment. This group focused attention on many aspects of underwater cultural resource work where advances in technology are making discovery, documentation, and recovery of historic resources more effective for researchers as well as salvors. For example, any or all three basic discovery methods—side-scan sonar, sub-bottom profiler, or magnetometers—should be used with archival or other archeological methods to locate resource types. Working like radar underwater, the side-scan sonar used deflected acoustic signals which are recorded as images on a paper copy as a sensor is towed behind a small boat. Contrasted with the horizontal view given by the side-scan, the sub-bottom profiler uses low frequency sound waves directed downward into sediments, giving a cross-section image. Also towed behind a research vessel, the 'mag' yields magnetic field data and measurements of differences between naturally occurring levels and those 'anomalies' of deviations from normal as caused by a cultural object or unusual natural resources. Contoured maps, two-dimensional graphs or source point maps can be drawn from mag data. This is a less costly discovery method in the remote sensing tool box, but does not discriminate between materials casting anomalies. Side-scan covers wide zones of submerged land surfaces but can be fooled by kelp forests or similar plant life and only records what juts up from surrounding a land surface.

In deep water or hazardous situations, the remote operated vehicles (ROV) equipped with video and still cameras give us dramatic footage of the resource, such as Titanic, where divers cannot go. In cooperation with others, the Service has used ROVs in joint underwater projects in the Great Lakes and Pacific Islands. Of course, these robot-like extensions of human eyes and hands are expensive and require highly trained personnel.

Once a vessel is located, diver archeologists can use the traditional grid-line-tape method of mapping. Now an exciting method marketed as SHARPS (Sonic High Accuracy Ranging and Positioning System) is available. One recent field test by the manufacturer assisted NPS and other divers to locate Isabella, an early-19th century vessel lost off Oregon's coast. Even though expensive, the quality of mapping appears to be equal to that produced by SCUBA-equipped archeologists. Radio communication between divers and with top-side project staff is a must and use of recently developed helmet or face masks with two-way real time radio speeds up the work progress and increases safety. When coupled with video, park visitors, other researchers and non-diver specialists can see what is going on in the bottom through monitors on shore, in a research vessel or saved on tape.

Underwater metal detectors of many trade names, still cameras and video units, section hoses or water jet lines, and air-filled lifting bags for large, heavy objects are other tools of the trade.

Many of these 'high' or 'low tech' tools are similar to those used on land but technological advances in diving equipment, discovery methods, vessel positioning systems, communication devices, and mapping methods all enable greater use of 'bottom time,' a precious commodity. Of course, each underwater historic resource project does not require a 'knob twisting wizard.' But as a study area or project area size increases, applications of many methods are the only way to effectively deal with submerged lands.

SCUBA-trained archeologists, historians and others are front-line technical staff, but persons with no SCUBA skills play critical roles also. Logistical and project management support, curatorial or artifact conservation expertise, background data-gathering, remote sensing or vessel positioning system operation, and report preparation are only some areas where non-divers assist in submerged cultural resource work. Today, with underwater video, instant diver-topside communications, and exploratory remote-operated vehicles, specialists can play active roles in a project many miles away from a project site. Electronic mapping systems are becoming available which increase a diver's limited time to work at a resource location. High or low tech, most submerged resources projects have plenty to do for everyone if the effort is designed effectively to reach realistic goals.

Historical archeology of this Nation does not stop at her coastline. Submerged historic sites represent frontiers in terms of legal issues, technology available, potential public interests, and management challenges. The Service has the most active program of any Federal agency but experienced staff members of the Submerged Cultural Resource Unit, the National Maritime Initiative in WASO, four regional offices, and a growing number of park employees are still 'a thin line of heroes.' Beneath lakes, rivers, reservoirs, seacoasts and island shores are unknown but highly significant historic resources waiting description.

Thanks to Cal Cummings, WASO Division of Anthropology; George Fischer, Southeast Archeological Center; and Toni Carrell, Submerged Cultural Resources Unit for their contributions.

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Integrating Survey, Planning and Compliance—A Model

Kirk Cordell

An innovative planning study is nearing completion at Mammoth Cave National Park in Kentucky. Conceived in the Interagency Resources Division in Washington and funded with Historic Preservation Fund monies, the project was developed to explore the potential benefits of a coordinated cultural resources planning effort between a national park and a State Historic Preservation Office (SHPO). Mammoth Cave was selected for this pilot study because it had a critical need to identify, evaluate and plan for its historic resources, including those constructed by the Service itself in the 1930s. In addition, the Kentucky Heritage Council (the Kentucky SHPO) needed to develop its planning model for that region of the state and was willing to contribute a third of the project cost in in-kind services and administrative oversight of the project. A steering committee was set up to launch the project and included representatives from the park, the Heritage Council, the Interagency Resources Division and the Southeast Regional Office of the National Park Service. The Heritage Council contracted with a local university professor to conduct research on the broader historic contexts for that region of the state and to hire a historian to survey the historic structures in the park.

From its inception, the planning study was intended to provide products which would be useful to both the park and the SHPO. Both needed to research relevant historic contexts (significant historical themes within a specific place and time period) in order to be able to evaluate the significance of any surviving historic structures within the area of study. The park needed to survey its resources and evaluate them against the broader background of related development in the region. Like many units in the National Park System, Mammoth Cave was perceived in the past to be principally a "natural" area, even though its legislation gives equal weight to its various resource types. The need to make good decisions about its historic resources had become increasingly apparent in recent years, as park managers struggled to find uses for older structures and the financial resources to maintain them. The SHPO needed to fit the resource data generated in the park into its larger responsibility to promote the preservation of historic resources within Kentucky. (The project was originally to include prehistoric/ archeological resources as well, but preparation of these contexts was deferred until the completion of the three-year archeological survey currently being undertaken at the park by the Southeast Archeological Center of the NPS). For the SHPO broad historic contexts were developed which identified the significant historic events and development patterns in the region, identified related resources, and established evaluation criteria. For the park, four more specific contexts were developed, all structures were inventoried, and a multiple property National Register nomination form was prepared. The four defined contexts provided the framework for listing the significant extant properties on the Register. These documents are all in draft and should be ready for publication in the near future.

While it is useful to know the history of a park and the historic significance of its resources, the real value of this planning exercise to the Park Service lies in a number of improvements in management of those resources made possible by the results of the study. The park is already in the midst of writing a new Resource Management Plan under the draft guidelines that emphasize an interdisciplinary approach and SHPO participation. It is far ahead of other parks in the System in producing its historic contexts, surveying its resources, and evaluating and nominating its significant historic structures. The next, and crucial, step will be to draft a programmatic agreement with the SHPO to streamline the Section 106 compliance process, thus reducing the amount of project-by-project

consultation which occurs under the current system. Since the SHPO has been intimately involved in the planning for the park's resources, there is already agreement between the Service and the SHPO about which resources are eligible for the National Register, what their condition is, and what integrity they retain. Working from this joint level of knowledge, NPS and SHPO will evaluate the range of activities which are expected to take place in and around these resources in the course of day-to-day management of the park. The two agencies will work together to define appropriate treatments and acceptable intervention thresholds which will trigger regional office and/or SHPO review. The goal will be to clearly define what can be done with the park's resources, freeing the park and the regional office to pursue normal park management while protecting the SHPO's interest in reviewing impacts which may be unacceptable to them. If regional office and SHPO review of park activities can be substantially reduced while still protecting the resources to the satisfaction of all parties, the benefits of the joint planning project will be apparent. Aside from any compliance agreement, however, the Service will now be able to make more intelligent decisions regarding the historic resources of Mammoth Cave and to weigh the historic values appropriately when they conflict with other legitimate park values and purposes. This project should serve as a model for other parks facing similar decisions about resources they may know little or nothing about. If so, the hard work of park staff, NPS planners, and the SHPO will pay dividends far beyond the borders of Mammoth Cave National Park.

Kirk Cordell is Chief, Cultural Resources Planning Division, Southeast Regional Office, National Park Service.

Note: The Editor wishes to thank Robert M. Polsgrove, Historic Sites Program Manager, Kentucky Heritage Council, for his contributions to this topic.

Historic Preservation Awards

The President's Historic Preservation Awards and National Historic Preservation Awards were recently presented to 28 projects. The awards program was conceived three years ago by the Advisory Council on Historic Preservation as a way to commemorate the 20th anniversary of the passage of the National Historic Preservation Act of 1966. The President's Historic Preservation Awards honor privately supported preservation achievements and acknowledge the significant contribution of free enterprise to historic preservation. National Historic Preservation Awards honor preservation achievements accomplished with Federal assistance. To be eligible for consideration, a project or program must have resulted in the preservation of a specific historic property that is listed in, or eligible for, the National Register of Historic Places; preservation must have been completed within the past 10 years; and the building, structure, or program must currently exist or be in use. An entry nominated for the President's Award must have been privately funded and must not have received significant financial assistance from Federal, state, or local government. A nomination for the National Historic Preservation Award must have had some Federal assistance in the project or program. Some of the winners include:

• **Benton County Courthouse restoration** (Corvallis, OR)—The oldest courthouse in Oregon still used for its original purpose, the restoration project was supported in part by a grant from the National Historic Preservation Fund.

• **Capital Hotel rehabilitation** (Little Rock, AR)—A grant from the National Historic Preservation Fund, along with preservation tax incentives, helped to finance this project.

• **Chocolate Factory rehabilitation** (Dorchester, MA)—A good example of an entire type of preservation that has been stimulated by the preservation tax incentives program.

• **Department of the Army historic preservation program**—Made especially significant by the number of historic properties controlled by the Army, including 14 National Historic Landmark districts, 5 NHL buildings, 2 NHL sites, and 25 districts listed on the National Register.

• **Felton (CA) Covered Bridge restoration**—The redwood bridge is listed on the National Register and is believed to be the tallest covered bridge in the U.S.

• **First African Baptist Church Cemetery urban archeology project** (Philadelphia)—The site was determined eligible for the National Register in April 1983 because of significant information it contained about the history of 19th-century black Philadelphians.

• **Grand Opera House rehabilitation** (Wilmington, DE)—Restoration stripped away many changes and additions made to the auditorium over the last century, and revealed superb natural acoustics in the hall. Federal assistance included National Historic Preservation Fund grants.

• **Guaranty Building rehabilitation** (Buffalo, NY)—Designed by Louis Sullivan in 1895, its 13-story height, lavish terra cotta and marble ornamentation, and mosaic friezes reflect the aspirations of its time. The project benefited from preservation tax incentives.

• **Lake Landing Historic District National Register nomination** (Hyde County, North Carolina)—Nomination to the National Register resulted in a comprehensive description of the district that serves as a model for rural historic district studies elsewhere in the state and Nation. The project was assisted by a National Historic Preservation Fund grant.

• **Mashantucket Pequot Archeological District project** (Ledyard, CT)—Some of the archeological sites, dating from about 1500, have been successfully nominated to the National Register.

• **Oley Township rural preservation planning project** (Berks Co., Pennsylvania)—Beginning in 1980, a community coordinating committee began a four-year program that included preparation of a pioneering National Register Historic District nomination for the entire township. This project exhibited great ingenuity in its use of the National Historic Preservation Act and the National Register as vehicles to further rural preservation.

• **Philadelphia Historic Preservation Corporation facade easement program** (PHPC)—The protected structures are included in the National Register of Historic Places and range from significant early 20th-century office towers to simple colonial houses. PHPC, using income produced from the facade easement program, has also nominated several Philadelphia districts to the National Register.

• **Steamship Wapama preservation program** (Sausalito, CA)—Built in 1915, Wapama is the last of some 225 steam schooners. In 1979, Wapama was in danger of breaking apart and was removed from the water and placed on a barge. After the barge had been anchored in the backwaters of Oakland Estuary for six years, a Park Service program was initiated to preserve, document and interpret Wapama for the public.

• **Washington Street Historic District revitalization** (South Norwalk, CT)—Nominated to the National Register in 1977, the renovation has returned properties to the tax rolls, improved public access to the Norwalk harbor waterfront, preserved the cast-iron facades of the area's turn-of-the-century commercial buildings, and inspired additional restoration efforts in the surrounding community. The project made effective use of preservation tax incentives.

Nautical Archeology and the Ships of Discovery

Within fifty years of Columbus' voyages to the New World, an armed merchant vessel was lost on Molasses Reef in what is now the Turks and Caicos Islands. Rediscovered in the 1970s, this wreck, one of the earliest yet documented in the Americas, was at first thought to be Columbus' own Pinta. While archeologists with the Institute of Nautical Archeology (INA) at Texas A & M University have determined that it is not Pinta, the wreck's scanty remains are offering new information on the ships that transported the seeds of European Culture to the New World in the wake of Columbus. More is actually known about ancient ships than those of the 15th and 16th centuries, largely because archeologists have devoted considerable time to the study of Greek and Roman shipwrecks.

The site plan, artifact drawing, and reconstruction illustrate how INA archeologists are relearning the forgotten past through nautical archeology. The site plan shows the remains of the wooden hull after excavation. From these minimal remains, archeologists were able to determine the size of the vessel, how it was constructed, and make educated guesses about how the Molasses Reef Wreck looked intact and afloat. The artifact drawing shows one of three gudgeons— brackets that attached the rudder to the hull—recovered from the wreck. The reconstruction shows where the gudgeons would have been located on the ship, and while the stern cannot be completely reconstructed because of the scanty remains of the hull, certain aspects of its construction, such as the exposed sternpost to which the gudgeons are attached was inferred from the gudgeons. By studying the Molasses Reef Wreck, another better preserved 16th century wreck at Highborn Cay, and one other 16th century wreck site, INA archeologists are working with the surviving archives and the physical record of the past on the ocean floor to provide the first detailed picture of the European ships of discovery as the 500th anniversary of Columbus' epic voyage draws near.

You can read more about the Ships of Discovery and other current maritime and nautical archeological projects throughout the world in a new publication:

James P. Delgado, ed. *Underwater Archeology Proceedings ,from the Society for Historical Archeology Conference,* Reno, Nevada, 1988

Available for $12.50 from the Society for Historical Archeology, P.O. Box 231033, Pleasant Hill, CA 94523-1033. Underwater archeology proceedings from the SHA conferences in 1985 and 1987 are also available.

Illustrations courtesy of the Institute for Nautical Archeology.

—JPD

The ICCROM Experience—1988 Training Programs

Allen Bohnert and Paul Cloyd

ICCROM is the International Center for the Study of the Preservation and the Restoration of Cultural Property, created in 1956 by UNESCO. Operation began in 1959, in Rome, Italy. ICCROM is an autonomous, scientific, intergovernmental organization comprised of 78 member countries and 68 associate members. It has evolved into one of the premier international conservation organizations—devoted to training, dissemination of information, conservation treatment, and research. The first training course, Architectural Conservation, began in 1965. Since that time, training courses have covered Mural Preservation, Scientific Principles of Conservation, Preventive Conservation in African Museums, Paper Conservation, Stone Preservation, Wood Conservation and Museum Security.

Paul Cloyd, Historical Architect at the Denver Service Center, and Allen Bohnert, Regional Curator, Rocky Mountain Region, attended ICCROM training programs in 1988. Paul attended the 5-month course on Architectural Conservation and Allen attended the 4-month course on Conservation of Mural Paintings and Related Architectural Surfaces.

ICCROM provides a unique learning atmosphere and a wonderful opportunity for increasing both mutual understanding of and sensitivity to one another's cultural traditions. These traditions have a pronounced affect on the philosophy each participant brought to the courses, influencing proposed solutions to common preservation problems.

The Conservation of Mural Paintings course is designed to give participants the theoretical and practical knowledge essential for diagnosing the causes of deterioration and selecting the most appropriate methods for conserving and restoring mural paintings.

Trainees jointly attended certain lectures and study tours with the Scientific Principles of Conservation course participants. Allen Bohnert also attended several sessions on earthen architecture presented for the Architectural Conservation course. This was particularly valuable because it related to the earthen plasters found in many of the archeological sites in the southwestern part of the Rocky Mountain Region.

Practical exercises included cross-section preparation, mortar and plaster preparation, execution of a mural painting, bio-tests, and stacco. Hands-on training in conservation treatment of mural paintings involved two weeks on the treatment of a 16th-century fresco in Santa Maria del Anima in Rome, and one month devoted to work at Castello Caetani in Sermoneta. Practical work at these sites covered documentation, examination, testing various cleaning methods, consolidation, treating lacunae, and reintegration.

Seminars held at conservation worksites focused on the causes and types of deterioration, the methods and materials being employed for conservation purposes, and the conservation philosophy followed at the worksite. These case studies gave us examples of innovative, practical, and more traditional solutions to mural painting conservation problems.

The architectural conservation course included lectures on the history of the conservation movement and its evolution; a slide talk illustrating the damage caused by eight million annual visitors to the Forbidden City of Beijing; presentation on structural rehabilitation with discussion of the concept of treatments being reversible and relating this to structural rehabilitation; traditional building material sources and application methods, the most important aspect of which was a detailed study for both traditional and modern repair materials; a discussion of climatic considerations for historic structures—moisture problems from different points of view, effects in a museum situation, effects on decorative finishes and structural deterioration aspects, showing the consequences on structures where humidity and moisture are problems and successful remedial procedures in several case studies; and urban and territorial conservation.

There was a wide variety of study projects undertaken by the participants, ranging from developing preservation guidelines for a 1930's English garden suburb to a comparison of the 1964 Venice charter to preservation law in China. Paul Cloyd's project examined compatible design for new services introduced into historic structures. He was surprised to find very little published on the aesthetic considerations of this problem. He presented what he felt to be successful approaches to some NPS projects and at some historic structures in Italy. Sadly, it was much more common to find insensitive installations, even on very significant structures by famous architects such as Michaelangelo and Borromini. Paul looked at these examples and presented ideas to modify these installations for better compatibility.

The NPS is mandated to ensure the long-term preservation of its prehistoric and historic buildings and the architectural surfaces found on these structures. Wall paintings, such as painted prehistoric plaster, are technically linked to architecture. They have, however, their own preservation problems. The specialized training provided through the mural painting conservation course will have direct benefit to the cultural resource preservation program of the Rocky Mountain Region. The painted plasters found in the archeological sites in this region and in historic structures have only begun to be systematically inventoried and monitored. The training will benefit future contract management, assist in developing approaches to resource preservation, expand the historic architectural experience within the Denver Service Center and provide the necessary expertise in the Rocky Mountain Region for emergency conservation treatment when necessary.

A program summarizing the Mural Painting Conservation course was presented to the Division of Conservation and Curatorial Services at Harpers Ferry Center. All handouts and the course curriculum are being placed in the Rocky Mountain regional library, and in the conservation library at Harpers Ferry Center. Copies of the course curriculum, handouts, lab manual, and Paul's study project report for the architectural conservation course are being provided to each historic architecture section of the Denver Service Center and to the Rocky Mountain regional library.

The ICCROM library contains few NPS cultural resource management publications, and the ICCROM library should be added to the mailing lists for such documents. They will prove to be invaluable examples for scholars and students who use this ICCROM library. The library is also part of the Conservation Information Network, a computerized database, thus making the publications even more widely available.

The courses are presently changing, as is ICCROM as an organization, and substantial improvements are planned for upcoming courses. The ICCROM experience was well worth the effort and the time.

Course Descriptions

Architectural Conservation

1. General Concepts of Conservation. Review of historic and contemporary conservation philosophy.
2. Survey and Conservation of Historic Buildings. Covered both documentation methods and general building conservation.
3. Conservation of Traditional Building Material. In-depth study of earth, metal, wood, stone, brick, mortar, plastic and paint.
4. Urban and Territorial Conservation. Study of the physical sociological and political aspects in a macro scale approach to architectural conservation.

Conservation of Mural Paintings

1. Introduction to Conservation. Covered art history and the history of conservation, basic chemistry, and laboratory procedures and exercises.
2. Introduction to mural paintings. Included the specific nature of mural paintings and the relationship with architecture, history and technique of mural paintings building materials, chemistry of porous building materials, and practical work (execution of a mural painting).
3. Deterioration of Mural Paintings. Reviewed the causes and effects of deterioration, general principles of climatology in structures, biology, analysis of salts and pigments, and practical work (stacco).
4. Conservation of Mural Paintings. Covered film forming substances and solvents, synthetic polymers, intervention methodology, consolidation, cleaning, documentation, and practical work (hands-on treatment of mural paintings).

The Society for History in the Federal Government

Martin Reuss

This article is the first of a series dealing with organizations that directly or indirectly impact National Park Service cultural resource programs and the personnel that manage those programs. In the next article of this series, Dr. Page Miller, director of the National Coordinating Committee, will discuss the function of that organization, emphasizing particularly their advocacy role.
—Ed

The Society for History in the Federal Government was established nine years ago, and now has nearly 450 members, including historians, archivists, curators, librarians, editors, and preservationists from both Federal and non-Federal offices. It was organized because many believed the Federal historical community should speak with one voice to advance professional goals and to promote study in the United States Government. We have published pamphlets, sponsored conferences, submitted Congressional testimony, cooperated with other professional organizations, and, in general, monitored activities of concern to our members. Most important, the Society has successfully created a professional network that identifies and strengthens common interests and stimulates discussion. The organization, in short, has created a sense of community.

The Society responds to professional concerns. It publishes and disseminates the "Principles and Guidelines" statement that serves as a guide to the duties, procedures, and objectives of the Federal historian. It has also published Federal Historical Programs: A Guide for Heads of Government Agencies that summarizes the ways in which historians can serve the bureaucracy. Other publications include the quarterly newsletter, The Federalist, and (in cooperation with the National Coordinating Committee and the American Historical Association) the biannual Directory of Federal Historical Programs and Activities, which has become an essential publication for those involved in government history. Finally, the annual fall banquet and spring meeting allow members to meet socially as well as to hear symposia and lectures on subjects of general interest.

The Society also sponsors an awards program. The Franklin Delano Roosevelt prize is given every three years for outstanding contributions to the study of Federal government history. Annual awards include the Henry Adams prize for a superior book-length history and the James Madison prize for a distinguished article. The John Wesley Powell prize alternates annually between historical preservation and historical display. The Thomas Jefferson prize alternatively recognizes documentary editions and reference materials.

The heart of the Society is the committee system. There are committees to address a variety of issues, including professional development, Federal historical programs, membership, publications, awards, access and declassification, program, bicentennial activities, archives, information management (including oral history), and outreach activities with other professional organizations and academic departments around the country. Dwight Pitcaithley of the North Atlantic Regional Office of the National Park Service presently chairs the Committee on Historic Preservation and Display (Should you have nominations, please call Dwight at 6171565-8840; for nominations for other awards, contact Pat Harahan of the Office of Air Force History at 202/767-5764). The Outreach Committee is headed by Dr. Larry Kelly of North Texas State University.

Today, issues involving park interpretation and cultural resources management are becoming as much of concern to the Society as independence for the National Archives once was or as access and declassification issues remain. The likelihood grows that the SHFG will need to create a new committee to address historic preservation and cultural

interpretation matters. Regardless of the issue, our position will always be based on what appears professionally best. If there are issues you believe should involve the Society, please let me know. Contact me at the Society's address, given below. Please call our membership chairperson, Sharon Thibodeau, at 202-523-3105 for a membership brochure or write her at the Society's address: The Society for History in the Federal Government, Box 14139, Benjamin Franklin Station, Washington, DC 20044.

Martin Reuss is President of the Society for History in the Federal Government.

Snee Farm: New National Site

Bruce Craig

On September 8, 1988, President Reagan signed Public Law 100-421 designating Snee Farm a National Historic Site. The property is the simple but beautifully crafted country estate of Charles Pinckney, one of the most important figures of the colonial and early national period.

Charles Pinckney National Historic Site (NHS) is located on the outskirts of Charleston, SC and was designated a National Historic Landmark in 1973. The site was included in the Department's 1987 Section 8 Report as an endangered National Historic Landmark, and most recently the property appeared on the National Trust for Historic Preservation's list of the Nation's 11 most endangered nationally significant historic places.

The move for National Historic Site designation began in 1986 when a developer bought the house and the surrounding 25 acres and announced plans to build 42 luxury homes there. Although the house itself was to be preserved, tremendous public outrage resulted in the formation of the Friends of Historic Snee Farm.

Senators Ernest Hollings (D-SC), Strom Thurmond (R-SC), and Congressman Arthur Ravenel (R-SC) introduced bills into Congress that would enable the National Park Service to bring the site into the National Park System as Charles Pinckney NHS. Meanwhile, the Friends organization launched a massive campaign to raise $1 million toward a $2 million dollar asking price, in an effort to acquire both the house and surrounding lands. The group successfully raised $1 million and purchased the property.

For more information about Charles Pinckney NHS, drop me a line at National Parks and Conservation Association, 1015 31st Street, NW, Washington, DC 20007.